

Datasheet for #sbcw19566 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

WARNING: Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). To be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.

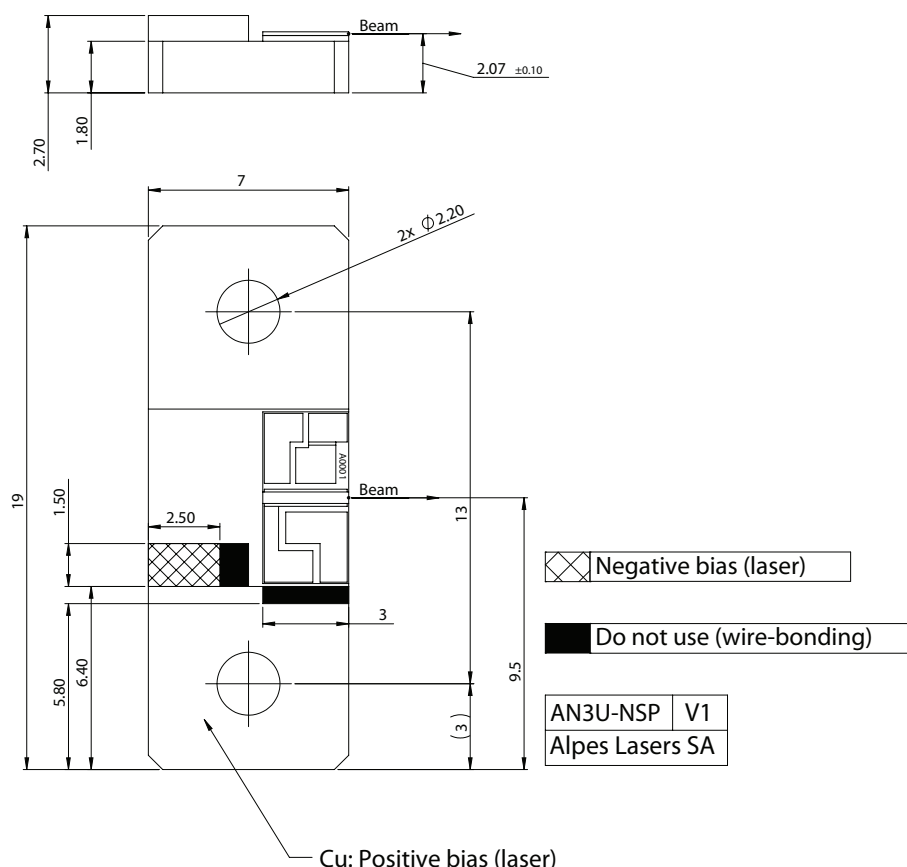


Figure 1: Mechanical and electrical interface for #sbcw19566 DN

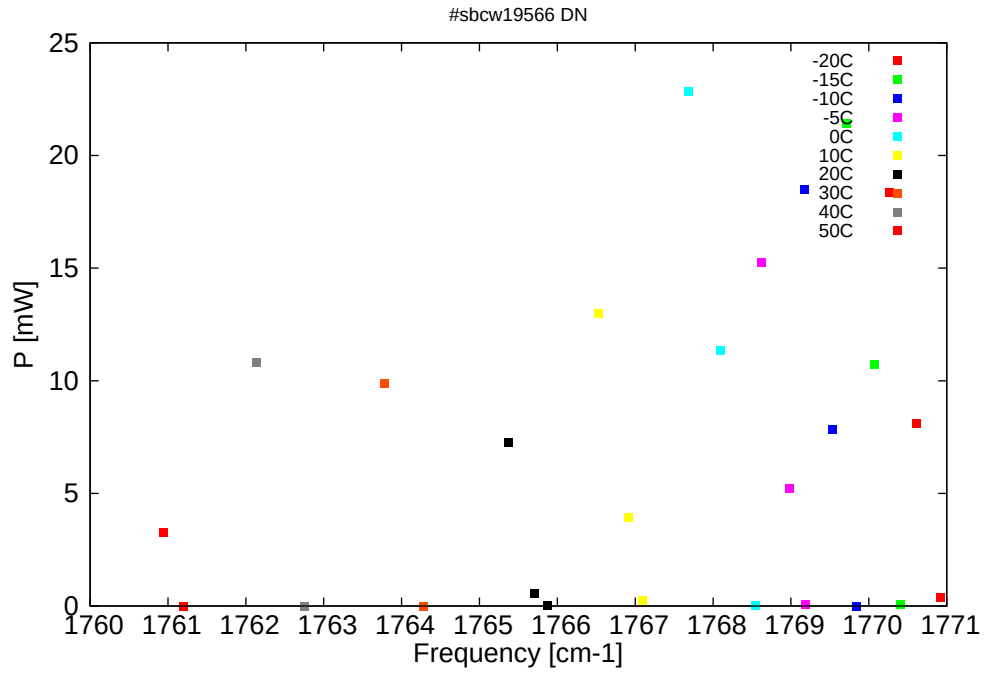


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

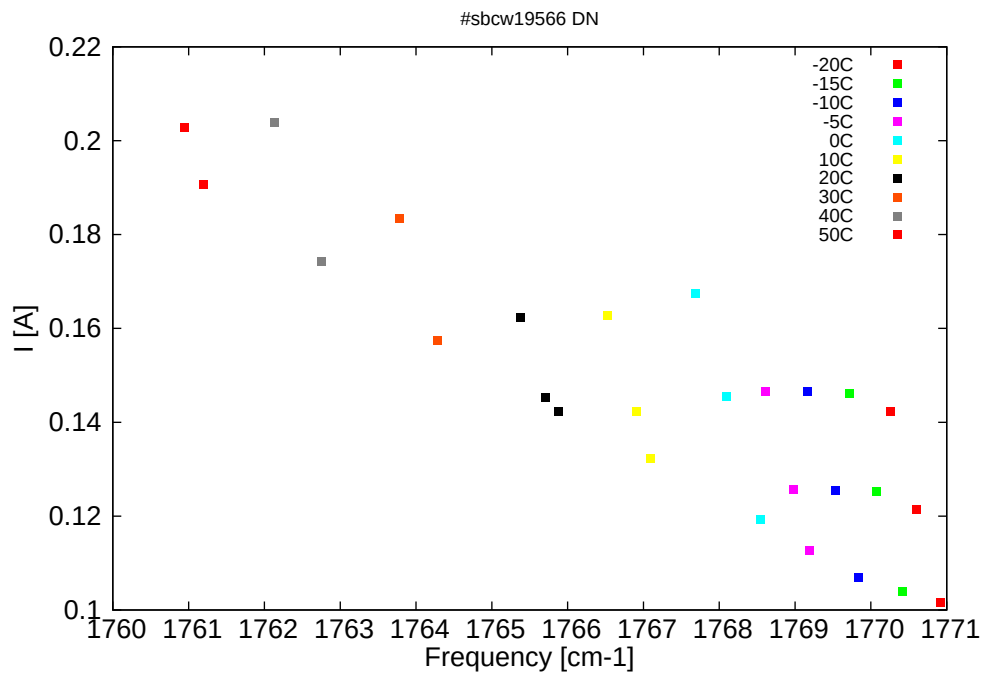


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5646.8	1770.9	0.4	-20	8.6	0.102
5647.8	1770.6	8.1	-20	8.81	0.121
5648.9	1770.3	18.4	-20	9.02	0.142
5648.4	1770.4	0.1	-15	8.6	0.104
5649.5	1770.1	10.7	-15	8.82	0.125
5650.6	1769.7	21.4	-15	9.02	0.146
5650.2	1769.8	0	-10	8.56	0.107
5651.2	1769.5	7.8	-10	8.76	0.125
5652.4	1769.2	18.5	-10	8.97	0.147
5652.3	1769.2	0.1	-5	8.57	0.113
5653	1769	5.2	-5	8.71	0.126
5654.1	1768.6	15.3	-5	8.91	0.147
5654.4	1768.5	0	0	8.58	0.119
5655.8	1768.1	11.4	0	8.84	0.145
5657.1	1767.7	22.8	0	9.04	0.167
5659	1767.1	0.2	10	8.6	0.132
5659.6	1766.9	3.9	10	8.69	0.142
5660.8	1766.5	13	10	8.88	0.163
5662.9	1765.9	0	20	8.62	0.142
5663.5	1765.7	0.5	20	8.63	0.145
5664.5	1765.4	7.2	20	8.78	0.162
5668	1764.3	0	30	8.65	0.158
5669.7	1763.8	9.9	30	8.87	0.183
5672.9	1762.8	0	40	8.71	0.174
5674.9	1762.1	10.8	40	8.95	0.204
5678	1761.2	0	50	8.76	0.191
5678.8	1760.9	3.3	50	8.86	0.203

Table 1: Singlemode optical output power as function of operating parameters.

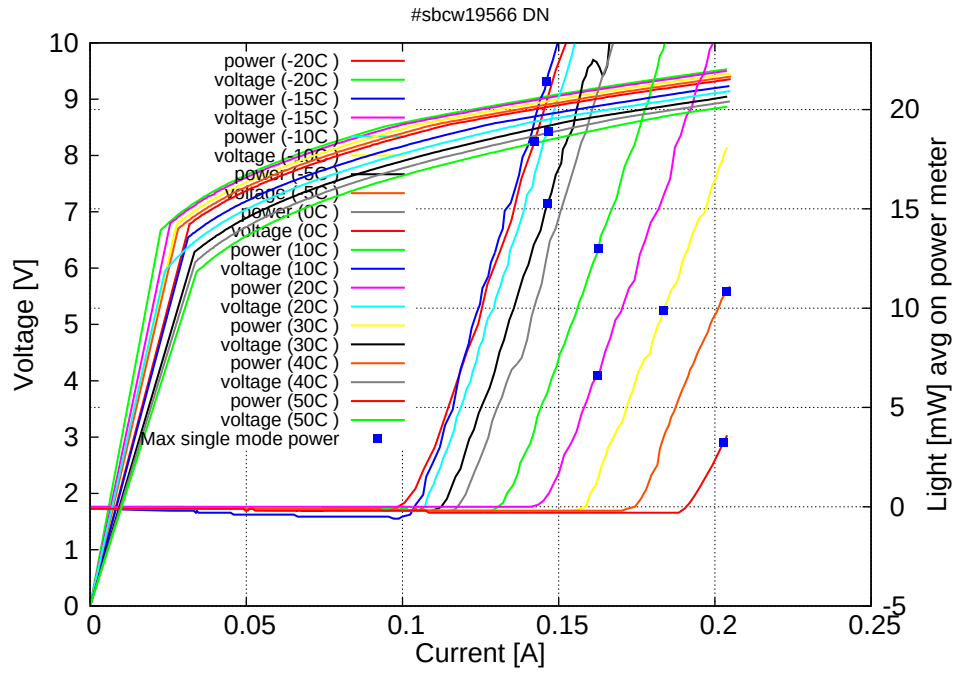


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.15A between -20C and -5C, 0.17A between 0C and 20C, 0.185A at 30C, 0.205A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

